

Attorney's Docket No. 571o-16B

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT
COPY

In re: Rao et al.
Appl No.: To be assigned
Filed: Concurrently Herewith
For: Group Art Unit: To be assigned
Examiner: To be assigned
COMPOSITIONS AND METHODS FOR ALTERING
AMINO ACID CONTENT OF PROTEINS

January 6, 2000

Assistant Commissioner for Patents
Washington, DC 20231

**INFORMATION DISCLOSURE STATEMENT
CITATION UNDER 37 C.F.R. § 1.97**

Sir:

Attached is a list of documents on form PTO-1449. It is requested that the Examiner consider these documents and officially make them of record in accordance with the provisions of 37 C.F.R. § 1.97 and Section 609 of the MPEP. By submitting the listed documents, Applicant in no way makes any admission as to the prior art status of the listed documents, but is instead submitting the listed documents for the sake of full disclosure.

All items are attached except those that were supplied in parent Application No. 08/988,015 filed 12/10/1997. Since the benefit of this application was claimed under 35 U.S.C. 120, no copies need to be furnished in accordance with 37 C.F.R. 1.98(d); however, copies will be furnished on request.

Respectfully submitted,

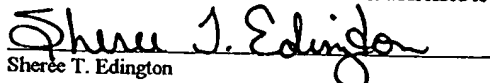


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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Sheet	1	of	2
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Application Number	To be assigned
Filing Date	Concurrently Herewith
First Named Inventor	Rao et al.
Group Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	5718-16B

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FOREIGN PATENT DOCUMENTS								T
Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
		Office	Number	Kind Code (if known)				
	3	WO	93/08682		State University of New Jersey - Rutgers	05/13/1993		
	4	WO	94/16088		Rijksuni-Versiteit Leiden	07/21/994		
	5	WO	95/22625		Affymax Technologies	08/24/1995		
	6	WO	95/31554		E.I. DuPont De Nemours and Company	11/23/1995		
	7	WO	96/38563		Pioneer Hi-Bred International, Inc.	12/05/1996		
	8	WO	97/35023		Pioneer Hi-Bred International, Inc.	09/25/1997		
	9	WO	97/20078		Affymax Technologies	06/05/1997		

Date
Considered

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute for form 1449A/PTO

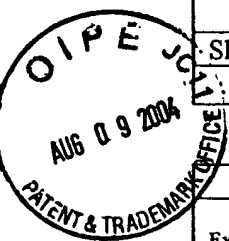
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 2 of 2

Complete or Known

Application Number	To be assigned
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Group Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	5718-16B

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
	10	ALTENBACH et al., Enhancement of the Methionine Content of Seed Proteins by the Expression of a Chimeric Gene Encoding a Methionine-Rich Protein in Transgenic Plants, Plant Molecular Biology, 1989, pages 513-522, vol. 13, Belgium	
	11	SCOTT et al., Searching for Peptide Ligands with an Epitope Library, Science, 1990, pp. 386-390, vol. 249	
	12	STASWICK, P., Novel Regulation of Vegetative Storage Protein Genes, The Plant Cell, January 1990, pages 1-6, vol. 2,	
	13	STEMMER, W., Rapid Evolution of a Protein <i>In Vitro</i> By DNA Shuffling, Nature, Aug. 4, 1994, pages 389-391, vol. 374	
	14	STEMMER, W., DNA Shuffling by Random Fragmentation and Reassembly: <i>In Vitro</i> Recombination for Molecular Evolution, Proc. Natl. Acad. Sci. USA, Oct. 1994, ppages 10747-10751, vol. 91	
	15	HONGDI et al., A Phage Display System for Studying the Sequence Determinations of Protein Folding, Protein Science, 1995, pp. 1108-1117, vol. 4	
	16	MARCELLINO et al., Modified 2S Albumins with Improved Tryptophan Content are Correctly Expressed in Transgenic Tobacco Plants, FEBS Letters, 1996, pages 154-158, vol. 385	
	17	MOLVIG et al., Enhanced Methionine Levels and Increased nutritive Value of Seeds of Transgenic Lupins (<i>Lupinus Angustifolius</i> L.) Expressing a Sunflower Seed Albumin Gene, Proc. Natl. Acad. Sci. USA, Aug. 1997, pages 8393-8398, Vol. 94, Agricultural Sciences	
	18	FRIGUET et al., Immunochemical Analysis of Protein Conformation, Protein Structure a Practical Approach, pp. 287-310, IRL Press, Oxford University Press, MRC Laboratory of Molecular Biology, Hills Road, Cambridge CB2 2QH, UK	

RTA01/2072075v1

Examiner Signature		Date Considered	
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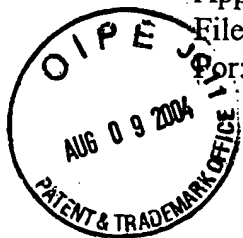
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Attorney's Docket No. 035718/193735

PATENT **COPY**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Rao *et al.* Confirmation No.: 1859
Appl. No.: 09/478,567 Art Unit: 1638
Filed: January 6, 2000 Examiner: Russell Kallis
For: COMPOSITIONS AND METHODS FOR ALTERING AMINO ACID
CONTENT OF PROTEINS



August 12, 2003

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT
CITATION UNDER 37 C.F.R. § 1.97

Sir:

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Respectfully submitted,

A handwritten signature in black ink, appearing to read "Leigh W. Thorne".

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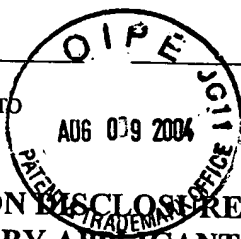
A handwritten signature in black ink, appearing to read "Lynda Jo Pixley".
Lynda Jo Pixley

Substitute for form 1449/PTD
(Revised 04/2003)

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1



Complete if Known

Application Number 09/478,567
Filing Date January 6, 2000
First Named Inventor Rao
Group Art Unit 1638
Examiner Name Russell Kallis
Attorney Docket Number 035718/193735

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.	Document Number Number - Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages of Relevant Figures Appear
	1	US-5,288,629	02-22-1994	Berkner	
	2	US-5,559,223	09-24-1996	Falco <i>et al.</i>	

FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.	Foreign Patent Document Country Code - Number Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	English Language Translation Attached

OTHER DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	English Language Translation Attached
	3	ARNOLD, F.H., <i>et al.</i> , "Optimizing Industrial Enzymes by Directed Evolution," <i>Adv. Biochem. Eng. Biotechnol.</i> , 1997, pp. 1-14, Vol. 58.	
	4	DYER, J.M., <i>et al.</i> , "Extensive Modifications for Methionine Enhancement in the beta-Barrels Do Not Alter the Structural Stability of the Bean Seed Storage Protein Phaseolin," <i>J. Protein Chemistry</i> , 1995, pp. 665-678, Vol. 14(8).	
	5	GOLDBERG, M.E., "Investigating Protein Conformation, Dynamics and Folding with Monoclonal Antibodies," <i>TIBS</i> , 1991, pp. 358-362, Vol. 16(10).	
	6	JAYNES, J.M., "De Novo Designed Synthetic Plant Storage Proteins: Enhancing Protein Quality of Plants for Improved Human and Animal Nutrition," <i>Proceedings of Alltech's 10th Annual Symposium</i> , Lexington, KY, May 1994, pp. 129-153.	
	7	LOPES, M.A., "Approaches for Enhancing the Lysine Content of Maize Seed," <i>Biotechnol. Nutr. Proc. Int. Symp. 3rd</i> , 1992, pp. 237-252.	

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